

The Ohio State University Wexner Medical Center

# Department of **SURGERY**

*60th Anniversary of  
the Zollinger-Ellison  
Syndrome*



The James Cancer Hospital and Solove Research Institute

2014



# Department of SURGERY

Statistics from FY 2013-2014



We're  
creating the  
future  
of surgery

	Page		Page
Welcome.....	2	Cardiac .....	16
100 Years.....	4	Colorectal .....	20
Leadership.....	6	General/Gastrointestinal.....	24
Overview.....	8	Pediatric.....	28
Clinical Care .....	10	Surgical Oncology .....	32
Patient Safety .....	11	Thoracic.....	36
Research .....	12	Transplantation.....	40
Education.....	14	Trauma, Critical Care & Burn ...	44
		Vascular.....	48





## Honoring the past... Creating the Future of Surgery

In April 1955, Drs. Robert Zollinger and Edwin H. Ellison presented observations in two patients who had a new clinical dilemma consisting of fulminant peptic ulceration associated with noninsulin secreting islet cell tumors of the pancreas<sup>1</sup>. Gastrin was identified as the hormonal cause of the disease and the Zollinger-Ellison syndrome was born<sup>2</sup>.

These preliminary reports summarized several collaborative investigations correlating hypersecretion of gastric acid by a tumor in the pancreas. At the time there were few if any treatment options to solve this clinical challenge other than surgical intervention. Resection of the pancreatic mass and operations to manage peptic ulcer manifestations evolved. In the modern era, proton pump inhibitors and histamine receptor antagonists have moderated the need for peptic ulcer intervention, yet curative resection of the tumor offers the best hope for cure.

As we recognize and celebrate the 60th anniversary of this landmark paper, the clinical observations and subsequent refinements of care by surgeons dedicated to translating their clinical interest in nutrition, physiology and patient outcomes to improve hundreds of lives was in evidence decades before the modern paradigms of translational discovery and outcomes sciences. Dr. Zollinger's emphasis on scientific inquiry and patient care is alive and well in the current activities of The Ohio State University Wexner Medical Center Department of Surgery as we endeavor to advance the clinical and academic mission.

Over the past decade surgeon scientists and researchers have joined the Department of Surgery faculty to enhance our translational research and clinical programs to include lung transplantation, advance burn care, robotic gastrointestinal and thoracic programs, advanced percutaneous valve treatments, advanced surgical oncology and sarcoma care. The capacity to provide extraordinary patient care in an academic setting where basic science and translational research findings can be not only developed into innovative therapies for our patients but also taught to the next generation of surgeons highlights the efforts of Drs. Zollinger and Ellison six decades ago.

"The training of the young physician to become a general surgeon is one of the forms of human endeavor that, over a period of several years, remains closely related to the leadership principles of the chief of the service. Lucky indeed is the trainee whose chief requires sustained excellent clinical and research activities, as well as dedication to the teaching of junior associates."<sup>2</sup>


Please join me in recognizing the efforts of the Department of Surgery faculty, residents, students and staff as we "Honor the Past and Create the Future of Surgery"

Robert S. D. Higgins, MD, MSHA  
*Professor and Chairman, Department of Surgery*



<sup>1</sup> Zollinger, R.M., Ellison, E.H. Primary Septic Ulcerations of the Jejunum Associated with Islet Cell Tumors of the Pancreas. *Annals Surgery*, 1955: 142 (4); 709-23


<sup>2</sup> R.M. Zollinger, *Elliott Carr Cutler and the cloning of surgeons*, Futura, Mt. Kisco, NY 1988






# The Ohio State University Department of Surgery







WILLIAM J. MEANS, M.D.  
HEAD OF SURGERY  
1914-1916



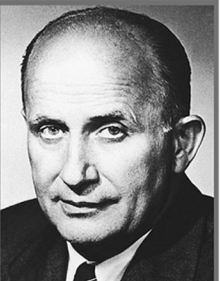
VERNE A. DODD, M.D.  
HEAD OF CLINICAL SURGERY  
1916-1922  
1927-1946




CHARLES S. HAMILTON, M.D.  
HEAD OF SURGERY  
1922-1926




GEORGE M. CURTIS, M.D., PH.D.  
CHAIR OF SURGICAL RESEARCH  
1936-1952




ROBERT M. ZOLLINGER, M.D.  
CHAIR OF SURGERY  
1946-1974




ROBERT M. ZOLLINGER CLUB  
OCTOBER 15, 1955




LARRY C. CAREY, M.D.  
CHAIR OF SURGERY  
1975-1986




OLGA JONASSON, M.D.  
CHAIR OF SURGERY  
1987-1992



RONALD M. FERGUSON, M.D., PH.D.  
CHAIR OF SURGERY  
1993-1999




E. CHRISTOPHER ELUSON, M.D.  
CHAIR OF SURGERY  
1999-2013




ROBERT S.D. HIGGINS, M.D., M.S.H.A.  
CHAIR OF SURGERY  
2013-

1847




STARLING MEDICAL COLLEGE - 1847-1907



STARLING-OHIO MEDICAL COLLEGE - 1907-1914

1914  
OSU College of Medicine and Department of Surgery founded

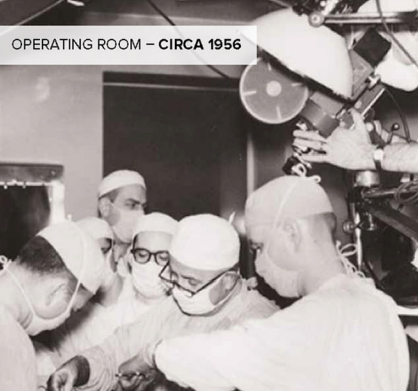


OHIO MEDICAL UNIVERSITY - 1892-1907

1920

1930

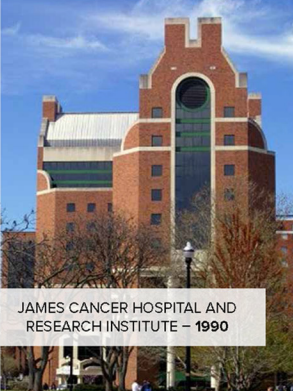
1940



OPERATING ROOM - CIRCA 1956

1950

1960




JAMES CANCER HOSPITAL AND RESEARCH INSTITUTE - 1990

1970

1980


1990

2000




WEXNER MEDICAL CENTER EXPANSION - 2014


2010




STARLING-LOVING HOSPITAL - 1917




OPERATING ROOM - CIRCA 1919




CONSTRUCTION OF DOAN HALL



DOAN HALL - 1950



NORTH WING DOAN HALL - 1960



THE OHIO STATE UNIVERSITY MEDICAL CENTER

4

The Ohio State University Department of Surgery

SURGERY.OSU.EDU

5



# Leadership



**Robert S. D. Higgins, MD, MSHA**  
Department of Surgery Chairman



**Juan A. Crestanello, MD**  
Chief, Division of Cardiac Surgery



**Bradley J. Needleman, MD**  
Director, Center for Minimally Invasive Surgery



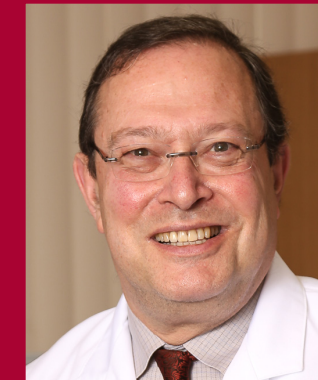
**Mark W. Arnold, MD**  
Chief, Division of Colorectal Surgery



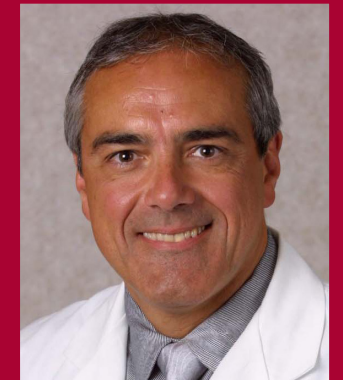
**Jeffrey W. Hazey, MD**  
Interim Chief, Division of General and Gastrointestinal Surgery



**Gail E. Besner, MD**  
Chief, Division of Pediatric Surgery



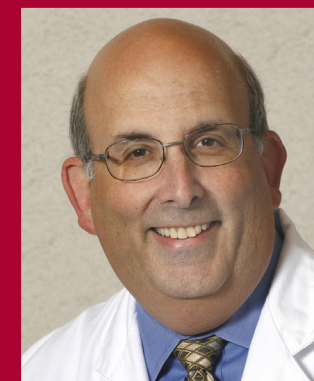
**Raphael E. Pollock, MD, PhD**  
Chief, Division of Surgical Oncology



**Patrick Ross, Jr., MD, PhD**  
Chief, Division of Thoracic Surgery



**Michell L. Henry, MD**  
Chief, Division of Transplantation Surgery



**Steven M. Steinberg, MD**  
Chief, Division of Trauma, Critical Care and Burn



**Patrick S. Vaccaro, MD**  
Chief, Division of Vascular Diseases and Surgery



# Overview

## Mission Statement

The missions of the Department of Surgery are consistent with those of The Ohio State University College of Medicine. They are the delivery of high-quality and safe patient care, the contribution to innovations in medicine through basic and translational research and clinical outcomes studies, and the education of medical students and postgraduate trainees. This report summarizes the changes and accomplishments in the department from July 1, 2013 through June 30, 2014.

## Organization

The Department of Surgery is comprised of nine specialty divisions: Cardiac Surgery; Colon and Rectal Surgery; General and Gastrointestinal Surgery; Pediatric Surgery; Surgical Oncology; Thoracic Surgery; Transplantation; Trauma, Critical Care and Burn; and Vascular Diseases and Surgery. In addition, the Center for Minimally Invasive Surgery, a multidisciplinary organization within the department, is dedicated to developing and implementing minimally invasive technologies and procedures.

95

Full-Time  
Faculty

68

Residents  
and Fellows

6

ACGME-Accredited  
Surgical Residencies

7

Approved Specialty  
Fellowships



## New Faculty

Recent recruitment efforts brought many new faculty members to the department. In addition to those listed below ongoing recruitment continues to attract exceptional specialists to the department.



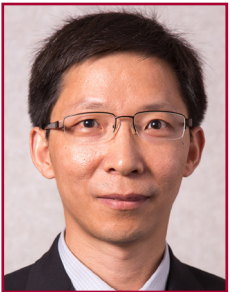
**J. Kevin  
BAILEY, MD**  
Trauma, Critical Care  
and Burn



**William  
CIROCCO, MD**  
Colon and Rectal Surgery



**Mary  
DILLHOFF, MD, MS**  
Surgical Oncology



**Renzhi  
HAN, PhD**  
Cardiac Surgery



**Ashraf  
EL-HINNAWI, MD**  
Transplantation



**Christian  
JONES, MD**  
Trauma, Critical Care  
and Burn



**Peter  
LEE, MD, MPH, MS**  
Cardiac Surgery



**Marc  
LEVITT, MD**  
Pediatric Surgery



**Lauren  
LICATA, MD**  
Trauma, Critical Care  
and Burn



**Michael  
MEARA, MD, MBA**  
General and  
Gastrointestinal Surgery



**Robert  
MERRITT, MD**  
Thoracic Surgery



**Raphael  
POLLOCK, MD, PHD**  
Surgical Oncology



**Lawrence  
SHIRLEY, MD, MS**  
Surgical Oncology



**Daniel  
VAZQUEZ, MD, MS**  
Trauma, Critical Care  
and Burn

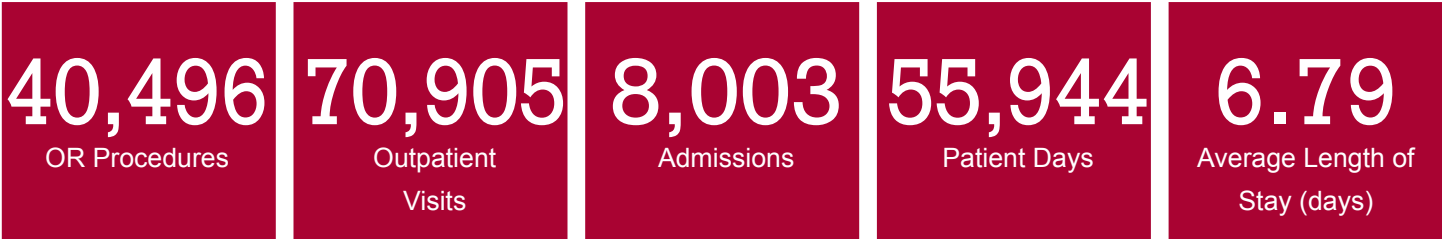


# Clinical Care

The Department of Surgery provides all aspects of major surgical care. This year, the department performed 40,496 surgical procedures and received 70,905 outpatient visits. Outpatient services are available at numerous sites, including:

- The Arthur G. James Cancer Hospital and Richard J. Solove Research Institute, 300 West 10th Avenue
- General and Vascular Surgery at Knightsbridge Surgical Center, 4830 Knightsbridge Boulevard
- JamesCare Comprehensive Breast Cancer Center, 1145 Olentangy River Road
- The Martha Morehouse Medical Plaza, 2050 Kenny Road
- Nationwide Children’s Hospital, 700 Children’s Drive
- The Ohio State University Medical Center, 450 West 10th Avenue
- The Ohio State University Medical Center Services, 770 Kinnear Road
- The Richard M. Ross Heart Hospital, 452 West 10th Avenue
- University Hospital East, 1492 East Broad Street

In addition we have outreach programs in vascular surgery in Ashland, Bellefontaine, London, Marysville, Upper Sandusky, and Washington Court House, Ohio.



James Cancer Hospital

OSU Hospital East



Ross Heart Hospital



Nationwide Children’s Hospital

# Patient Safety

Providing high quality surgical management of diseases while minimizing the risk of preventable complications is critically important in today’s healthcare environment. Thoracic surgeon **Susan D. Moffatt-Bruce, MD, PhD** is the Chief Quality and Patient Safety Officer and Associate Dean of Clinical Affairs for Quality and Patient Safety at the OSU Wexner Medical Center. The mission of this team is to improve the quality of care, decrease the number of re-admissions, lower costs and increase value, and to provide training on quality improvement and patient safety.

**Patient Safety Indicators:** The U.S. Department of Health and Human Services’ Agency for Healthcare Research and Quality establishes patient safety indicators (PSIs) based on administrative and billing data. Since 2012, OSU surgical teams have been working to identify the true incidence of these PSIs particularly as they relate to iatrogenic injuries, post-operative hematomas and surgical post-operative respiratory failure. To date, with the help of surgeons and residents, the team has improved over 40% of these indicators.

**UHC Mortality (University HealthCare Systems Consortium):** Every year we compare and benchmark our success measured by lives improved and saved. The mortality index is a ratio of the number of patients we save over the number of patients that were expected to not survive. Since 2012, The Patient Safety and Quality team has worked with the surgeons and residents to improve documentation of how sick our patients are upon presentation to OSUWMC. Additionally, focused review of all mortalities across all medical center care teams have been invaluable to finding opportunities to continuously improve.

**Crew Resource Management:** In 2010, OSUWMC embraced Crew Resource Management (CRM) training and has trained over 5,000 faculty and staff in team training and using standardized checklists. This has been shown to improve patient safety, not only in the operating room, but also across the care continuum. In particular, the operating rooms, the endoscopy suites, the emergency departments and the invasive cardiology laboratories have embraced this approach and continue to excel in a culture of safety. The Safe Surgical Checklist is an example of a hard wired safety tool and has now been used in the operative and procedural areas since 2008.

**Research in Clinical Outcomes:** We engage faculty, residents and staff in research that measures the success of this Quality and Patient Safety Program. Particular areas of interest include the reduction of retained foreign bodies, using Google Glass® in crisis checklist simulations and attempting to measure the return on investment for culture change using Crew Resource Management.





# Research

Research efforts continue to focus on three major areas: wound healing, vascular biology and transplantation, and tumor biology. Fifty-three faculty members were principle investigators, cumulatively publishing 249 books, book chapters and peer-reviewed journal articles.

The Department of Surgery has the goal to become a Top 20 NIH funded U.S. academic surgery program. We moved closer to this goal in FY 2013-2014 ranking 28th by the Blue Ridge Institute for Medical Research, up from 38th in FY 2012-2013. Strategic plans include investing in a targeted number of highly productive and successful investigators to accelerate discovery and increase NIH funding, increasing the number of annual NIH proposals and submissions, and developing a research and innovation pathway infrastructure.

Our investigators have been awarded several new NIH RO1 grants, and in 2014 new faculty member Renzhi Han, PhD brings an additional two RO1 grants to the department.

The proposed Center for Surgical Research, Outcomes and Innovation has the goal to coordinate and streamline clinical, translational and outcomes research efforts within the DOS and to maximize synergies between divisions to facilitate clinical research. Plans include recruitment of an outcomes research director and the establishment of a clinical trials management office.

53  
Principle  
Investigators

249  
Publications

### New Research Funding

During fiscal year 2013–2014, research funding awarded through The Ohio State University Office of Sponsored Programs and Nationwide Children's Research Institute to principal investigators in the Department of Surgery totaled more than \$7.7 million.

Federal funding was more than \$5.17 million, or 67 percent of total funding. Funding from industry was more than \$1.75 million, or 23 percent of the total. Non-federal funding was more than \$780,000, or 10 percent of the total.

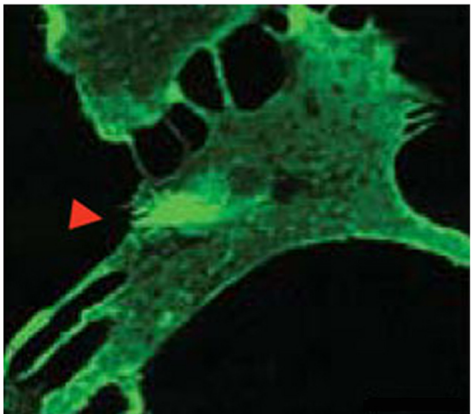
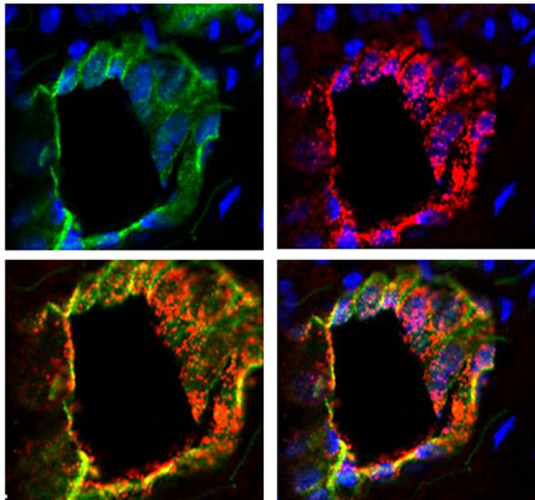
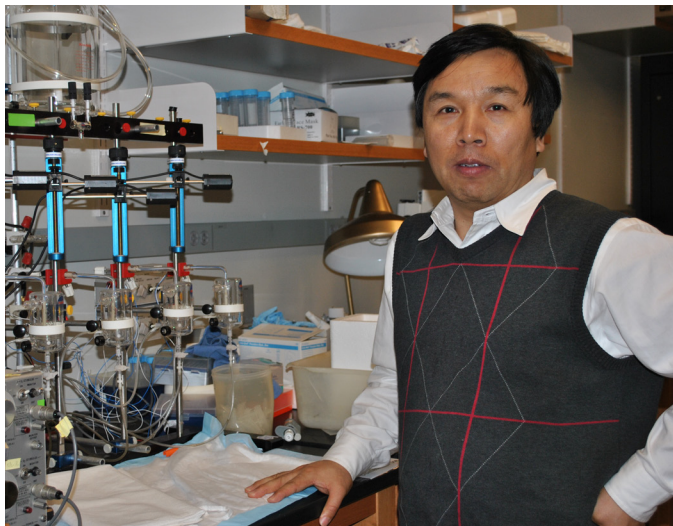
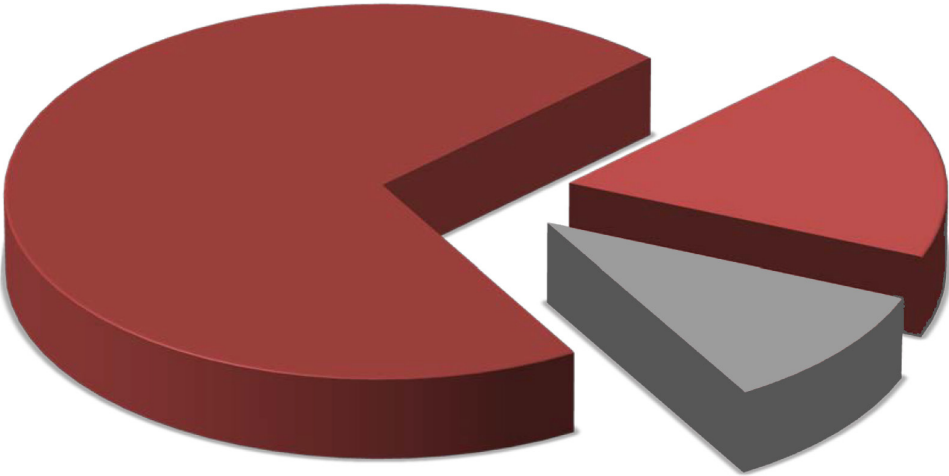
### Department Funding

\$5.17+ million  
Federal Funding

\$1.75+ million  
Industry Funding

\$780,000+  
Other Non-Federal Funding

\$7.7+ million  
Total Funding



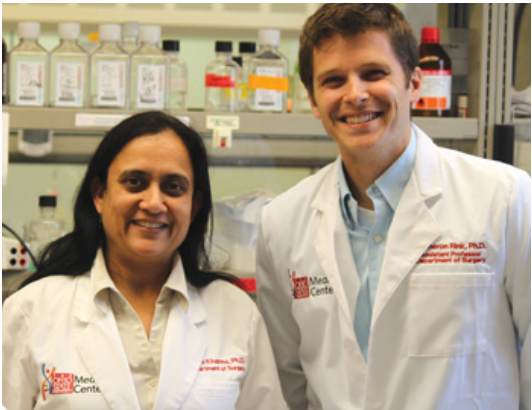
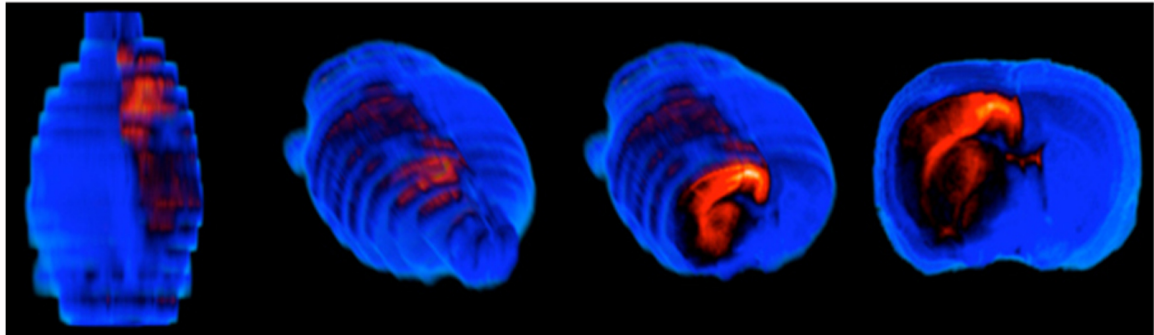
**New RO1 Grants**  
Dr. Renzhi Han. Molecular and cellular functions of Ano5 in the heart; \$1.8+ million

Dr. Renzhi Han. Mechanisms of muscle inflammation in muscular dystrophy; \$1.6+ million

Dr. Savita Khanna and Dr. Cameron Rink. iGOT neuroprotection; \$1.6+ million

Dr. Chandan Sen and Dr. Sashwati Roy. MicroRNA control of wound healing; \$1.2+ million

Dr. Lisa Yee, et al. Omega-3 fatty acids and ERPR(-) and HER-2/neu(+) breast cancer prevention; \$1.2+ million





# Education

Twenty-one residents and fellows completed their training programs in 2013-2014. Six went on to community practice, eight to further training, six to academic appointments and one to a military appointment. Over two hundred medical students from the College of Medicine perform clinical rotations on our surgical services. We re-engineered our honors program in surgery, making it practical and up-to-date for our students entering careers in surgery. Sixteen students completed the surgical honors program. Twenty-one students entered surgical training in this academic year.

## Graduate Programs in Surgery

The surgical residency programs at The Ohio State University College of Medicine share a common goal: to provide an environment conducive to learning in which physicians prepare to function as well-qualified, independent specialists in surgery.

This year, 68 residents and fellows participated in the Department's 13 residency programs, which consist of six residencies accredited by the Accreditation Council for Graduate Medical Education (ACGME) and seven approved specialty fellowships. These programs provide training in acute care surgery, cardiothoracic surgery, general surgery, minimally invasive surgery, advanced endoscopic surgery, pediatric surgery, surgical critical care, surgical oncology, transplantation, and vascular surgery.

Surgical residents at Ohio State are dedicated to learning and teaching advanced surgical techniques and procedures, and assume a major responsibility for the clinical education of medical students. The integrated and affiliated institutions of the program provide clinical resources for graduate and undergraduate surgical education. The Ohio State University Wexner Medical Center and the Department of Surgery host a variety of forums and seminars where clinicians and researchers share their expertise and advance the profession.



Research is a vital component of the Department of Surgery's mission and an integral element of its training programs. Research efforts are focused on key areas of interest that promise to yield significant results in the understanding of disease and in the improvement of clinical care. The Department of Surgery's Office of Surgical Research promotes interdisciplinary research activity and the integration of clinical and basic science research. The Department's stature and the reputation of its researchers and clinicians enable it to garner significant funding from private industry and from federal sources, such as the National Institutes of Health.







**The Division of Cardiac Surgery** marked a year of transitions. Dr. Robert Higgins was appointed Chairman of the Department of Surgery in the College of Medicine and Surgeon-in-Chief of The Ohio State University Wexner Medical Center. Dr. Juan Crestanello was named interim Division Chief and after a national search, he was appointed as the Director of the Division. He will also hold the first “The Gerard S. Kakos, MD, and Thomas E. Williams Jr., MD, PhD, Professorship”. This was made possible by generosity of Drs. Kakos and Williams. Drs. Kakos and Williams practiced cardiothoracic surgery at OSU and at Grant Hospital for more than 30 years setting the standard for excellence in cardiac surgery care in the Columbus community.

Drs. Juan Crestanello is a national leader in the treatment of aortic diseases, percutaneous aortic valves and complex adult cardiac surgery. Dr. Ahmet Kilic has assumed the leadership role in the heart transplant and mechanical circulatory support program. Under his leadership, the heart transplant and mechanical circulatory support program has been reinvigorated. Drs. Kilic and Higgins have been instrumental in building the mechanical circulatory support and heart transplantation programs with renewed focus and commitment to the care of patients with advanced complex heart failure. Dr. Peter Lee was recruited from Stanford University as a new faculty member. Dr. Lee has expertise in mechanical circulatory support and heart transplant, and he is now an integral member of the advanced heart failure program at OSU Wexner Medical Center. Dr. John Sirak continues to build a national referral practice for the treatment of arrhythmias using his innovative thoracoscopic maze procedure. Dr. Bryan Whitson successfully restarted the lung transplant program and performed the 100th lung transplant at Ohio State.

The division has once again partnered with the Division of Thoracic Surgery to provide comprehensive training for residents. Our goal is to train the next generation of surgeons to be capable, competent and highly successful professionals in the field of thoracic surgery whether in community practice or an academic environment. Drs. Mark Galantowicz, Patrick McConnell and Toshiharu Shinoka provide an outstanding experience in the field of congenital and structural heart disease at Nationwide Children’s Hospital as part of our program.







Our Mission

The Division of Cardiac Surgery is dedicated to preserving and improving life for patients with heart and valve disease.

Research

The faculty of the Division was responsible for more than 49 peer reviewed journal articles, 3 book chapters and 26 national and international presentations. Dr. Jianjie Ma has continued his research on MG53 and cell membrane repair. His research is now funded through three NIH RO1 grants

New clinical research projects included:

- A phase II multi-center, parallel group, randomized, double blind, proof-of-concept, adaptive study investigating the safety and efficacy of THR-184 administered via intravenous infusion in patients at increased risk of developing renal failure
- Clinical outcomes assessment of the Mitra-Clip percutaneous therapy for high surgical risk patients (COAPT)
- REPRISE III trial that investigates a new transcatheter aortic valve replacement system.



Clinical Programs

- Adult cardiothoracic surgery
- Aortic surgery
- Arrhythmia surgery
- Coronary artery bypass surgery
- Heart failure surgery
- Heart transplantation
- Lung transplantation
- Mechanical circulatory support
- Minimally invasive heart surgery
- Robotic surgery
- Total artificial heart transplantation
- Transcatheter aortic valve replacement

Educational Programs

- Two-year cardiothoracic surgery fellowship accredited by the Accreditation Council for Graduate Medical Education.
- One-year fellowship in Advanced Heart Failure/Transplantation/Mechanical Circulatory Support
- Comprehensive rotation in cardiothoracic surgery for first- and third-year residents in general surgery
- 8 week Summer Scholars program exposing 1st year medical students to the field of cardiothoracic surgery

The Ohio State University Richard M. Ross Heart Hospital is the only hospital in central Ohio nationally ranked in cardiology and heart surgery by U.S.News & World Report. Our expert physicians and staff can treat any cardiovascular condition, and our researchers are continually turning today’s science into tomorrow’s treatments.



# Colon and Rectal Surgery



**The Division of Colon and Rectal Surgery** continues to grow and expand its presence in the clinical care of patients with benign and malignant diseases of the colon and rectum. Patient volumes have continued to grow in all facets of the division, with a marked increase in the treatment of inflammatory bowel disease and treatment for malignant disease of the colon and rectum. Educational opportunities for medical students, residents and fellows are increasing as well, with the recruitment of an additional full time faculty in the division, as well as the new leadership role of Dr. Alan Harzman as the Director of the General Surgery residency program.

After eleven years as the Director of the General Surgery residency program, Mark W. Arnold, MD, FACS, FASCRS, professor of clinical surgery, and Chief of the Division of Colon and Rectal Surgery, has stepped-down from this position. He continues service to educational leadership as the Vice Chair for Education in the Department of Surgery. During Dr. Arnold's directorship several key programs were implemented including the diversity program, professional development and the Master of Medical Science Program.







# Our Mission

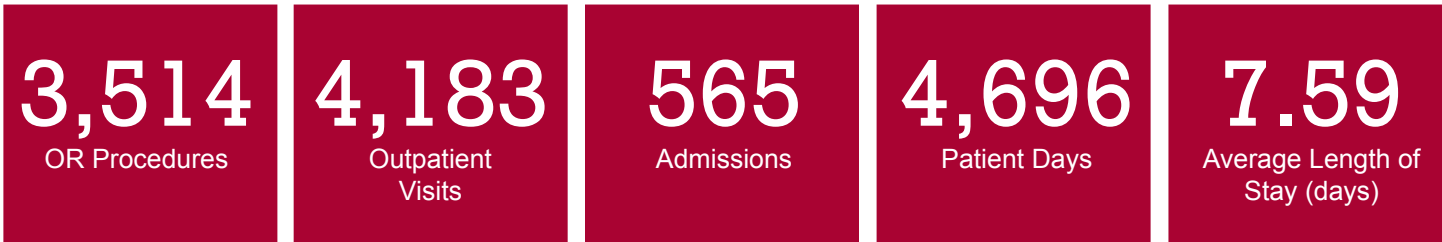
The Division of Colon and Rectal Surgery is dedicated to the achievement of excellence in patient care, medical education and clinical training, and clinical research.

## Research Programs

- Minimally invasive surgical techniques

## Accomplishments in Research

- Faculty members in the division published 18 scholarly articles, abstracts, and chapters and gave 19 presentations at national meetings.



**Clinical Programs** All faculty members in the division are board certified by both the American Board of Surgery and the American Board of Colon and Rectal Surgery, and each has completed a Fellowship in Colon and Rectal Surgery. Division faculty includes: Mark Arnold, MD, William Cirocco, MD, Alan Harzman, MD and Syed Hussain, MD. Providing specialized care to our patients, as well as teaching the next generation of surgeons the care and treatment of colorectal diseases, is a top priority. The Division collaborates with the Division of Gastroenterology, Hepatology and Nutrition to continue to improve patient access and outcomes.

- Treatment of benign and malignant diseases of the colon and rectum
- Colon and rectal cancer
- Inflammatory bowel disease
- Crohn's disease
- Diverticulitis

## Educational Programs

- Colon and Rectal Surgery Fellowship Rotation

## Leadership in Education

- Division faculty are integral to the academic mission of the Department of Surgery; Dr. Mark Arnold is Vice Chair for Surgical Education and Dr. Alan Harzman is the Program Director for General Surgery Training and the Medical Student Clerkship Director for the Department of Surgery.





**The Division of General and Gastrointestinal Surgery** is committed to excellence in education, training, research and clinical care in general and foregut surgery. We strive to offer the newest and most cutting edge treatments. Our surgeons are leaders in their respective fields and we continue to recruit the best and brightest talent to expand our Division's ability to offer the best to our patients. We make contributions to surgery in the fields of gastroesophageal reflux disease, endoluminal and minimally invasive surgery, bariatric surgery, surgical endoscopy, and the treatment of malignant disease of the gastrointestinal tract.

Significant leadership changes occurred during the 2013-2014 academic year. Jeffrey Hazey, MD was appointed as interim Chief of General and Gastrointestinal Surgery. Within the Center for Minimally Invasive Surgery (CMIS) Bradley Needleman, MD was appointed Director. Dean Mikami, MD is the Associate Director of Education and International Scholars. Vimal Narula, MD is the Associate Director of Clinical Services and Kyle Perry, MD is Associate Director of Research.



Our clinical teams are recognized by excellence in quality metrics and patient satisfaction. The Bariatric Surgery Program holds Center of Excellence status, four of our surgeons are recognized as Best Doctors in America and we serve as the treatment and referral center for gastrointestinal surgical disease in the region. Division surgeons perform a major role in the multidisciplinary Hepato-Pancreato-Biliary Service. We are one of only two centers in Ohio offering per-oral endoscopic myotomy (POEM), a minimally invasive treatment for achalasia which is a rare disease of the muscle of the esophagus that make it difficult to swallow food.

Clinical Programs

- Comprehensive gastrointestinal surgery services
- Minimally invasive surgery
- Bariatric surgery
- Benign and malignant esophageal disorders
- Gastroesophageal reflux
- Hepatobiliary and pancreatic cancer
- Wound care

Research Programs

- Amputee limb health
- Clinical wound healing
- Gene therapy and the effects of early genetic changes in pancreatic cancer
- Minimally invasive surgical techniques
- Regenerative medicine
- Vitamin E and neurodegeneration
- Wound angiogenesis and healing

Educational Programs

- Fully-accredited residency in general surgery
- One-year clinical assistant professorships in minimally invasive surgery and advanced therapeutic endoscopy
- Four-week subinternship in general surgery
- Honors program in surgery for fourth-year medical students
- Six-week clerkship in general surgery
- Master of Medical Science Program



# General and Gastrointestinal Surgery



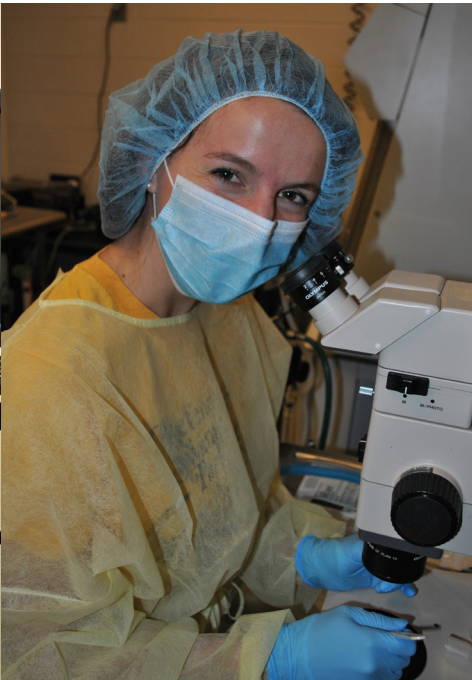
**Our Mission** The Division of General and Gastrointestinal Surgery is dedicated to the achievement of excellence in patient care, medical education and clinical training, and basic science and clinical research.

## Accomplishments in Research

- Industry sponsored clinical research initiated this year includes the LINX post-market registry, Kyle A. Perry, MD, principal investigator (PI), the MiniLap vs. Traditional Laparoscopic Cholecystectomy randomized clinical trial, Dean J. Mikami, MD, PI, and the OPUS study – PDT for treatment of cholangiocarcinoma, Jeffrey W. Hazey, MD, PI.
- NIH RO1 for the investigation “Wound Angiogenesis” awarded to principal investigator Chandan Sen, PhD. Total award \$1.9M
- Jeffrey W. Hazey, MD, was awarded a Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) grant to investigate a resident training curriculum for Fundamentals of Endoscopic Surgery (FES). FES testing of residents nationwide becomes mandatory in 2017; OSU is a FES testing site.
- Our bariatric surgeons are working with OSU interventional radiologist, Hooman Khabiri, MD, on an investigation into left gastric artery embolization for weight loss, the GET LEAN study. The FDA has granted the participating sites, Wright State University and OSU, permission to begin this pilot, Investigational Device Exemption (IDE) study.

## Accomplishments in Education

- Completion of the general surgery residency by Dr. Amy Collins, Dr. Eric Luedke, Dr. Laura Peterson, Dr. Thomas Pham, Dr. Ricardo Quarrie and Dr. Jennifer Schwartz.
- Completion of the fellowship in minimally invasive surgery by Dr. Umer Chaudhry and Dr. James Rydlewicz, and completion of the fellowship in advanced therapeutic endoscopic surgery by Dr. Michael Meara
- CMIS held 68 educational events which included Continuing Medical Education (CME) and non-CME courses and education and training labs with over 332 participants that consisted of practicing surgeons, allied health professionals, surgical fellows and residents and students.
- Dr. David Renton, assistant professor of clinical surgery, was bestowed the Department of Surgery Faculty Teaching Award, presented by Surgery residents and fellows, and Dr. Richard Schlanger, associate professor of clinical surgery, was awarded the Mikhail Novikov OSU WMC Faculty of the Year Award by the Department of Family Medicine Residency Program.







**The Division of Pediatric Surgery** conducts its clinical, educational, research, and academic programs at Nationwide Children's Hospital (NCH), a 12-story, 750,000-square foot facility. Nationwide Children's Hospital is one of the largest children's hospitals in the country, with an impressive total of 552 beds, and close to 1 million patient visits each year. It is consistently ranked in all 10 specialties of the *U.S. News & World Report* listing of the best Children's Hospitals in the United States, and once again made the U.S. News & World Report's Best Children's Hospital Honor Roll in 2014, ranked at #7. This "best of the best" distinction was awarded to only 12 children's hospitals across the country. NCH ranks among the Top 10 pediatric research institutes in the country as measured by National Institutes of Health funding, with three dedicated research buildings. The pediatric surgery service is one of the busiest services of its kind across the United States. Nationwide Children's Hospital is one of the only hospitals in the United States that is an American College of Surgeons-designated Level I pediatric trauma center, an American Burn Association verified pediatric burn center, and a Commission on Accreditation of Rehabilitation Facilities (CARF) approved pediatric rehabilitation center.

Led by Dr. Gail Besner, the faculty members in the division include 14 board-certified pediatric surgeons (six of whom are also certified in surgical critical care), one hospitalist (who is board-certified in general surgery specializing in burn and trauma care), and a full-time Ph.D. scientist. In 2014, world-renowned pediatric colorectal surgeon Dr. Marc Levitt joined the faculty. In addition to providing general pediatric surgical care, the division provides world-leading expertise in multiple focused areas of excellence including pediatric minimally invasive surgery, burn care, trauma care, inflammatory bowel disease surgery, adolescent bariatric surgery, gastrointestinal motility disorders, chest wall deformities, surgical oncology, and surgical endocrinology.

## Research

- The Center for Surgical Outcomes Research, directed by Dr. Katherine Deans and Dr. Peter Minneci, is a comprehensive surgical outcomes research program which employs a wide range of methodologies in order to determine optimal interventions for the management of surgical diseases and the minimization of post-operative complications.
- Dr. Besner's lab is currently in its 21st year of continuous funding from the NIH to support her basic science research on heparin-binding EGF-like growth factor (HB-EGF). In addition, she recently received a Technology Development Fund Grant and an Ohio Third Frontier Grant for her innovative work on the production of tissue engineered intestine.
- Dr. Christopher Breuer's lab is in the midst of the first FDA-approved clinical trial evaluating the use of tissue engineered vascular grafts in congenital heart surgery. They enrolled two patients into the trial and performed the first implantation of a tissue engineered vascular graft at Nationwide Children's Hospital in March 2014.
- Dr. David Brigstock continues his studies on mechanisms of fibrosis in the liver injury and is developing innovative methods by which it can be assessed and treated. He is currently investigating novel regulation of hepatic stellate cells, focusing nanovesicles, or "exosomes", that are secreted by the cells and shuttle complex molecular information between them.







**Our Mission** The Division of Pediatric Surgery, in alignment with Nationwide Children's Hospital, believes that no child should be refused necessary care and attention for lack of ability to pay. We are committed to fulfilling the CARES mission by providing the highest quality: Patient Care; Advocacy for children and families; Pediatric Research; Education of patients, families and future providers; and Outstanding Service to accommodate the needs of patients and families. Our vision is to create optimal health for every child in our community.

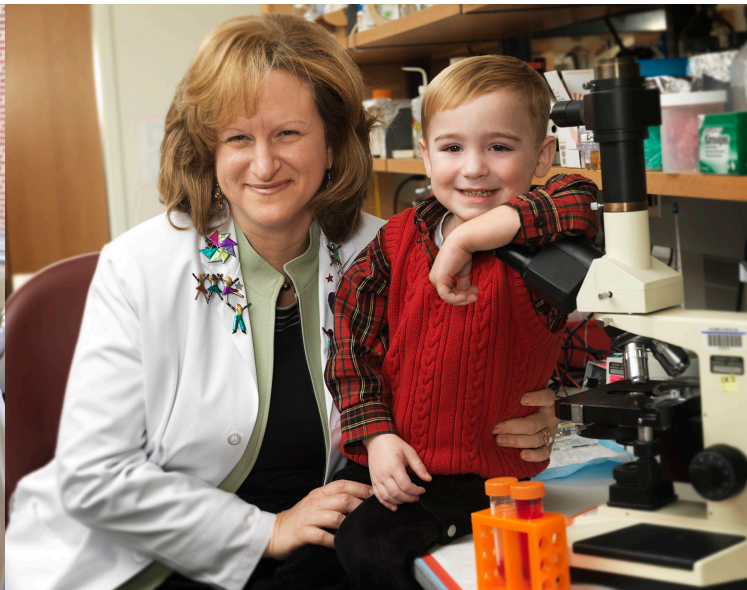
Clinical Care

- Expansion of robotic surgery to the surgical management of children
- Center for Colorectal and Pelvic Reconstruction offers multispecialty team of colorectal surgery, gastroenterology, urology, and gynecology.
- Bariatric surgery program for the treatment of morbidly obese adolescents
- Advanced minimally invasive procedures for thoroscopic and laparoscopic management of congenital and acquired lung and intestinal disorders
- Development of a multi-disciplinary surgical oncology clinic
- Pediatric surgical clinical and operative services in Westerville, Ohio and clinical services in Mansfield, Ohio

4,641	7,671	1,951	9,110	4.97
OR Procedures	Outpatient Visits	Admissions	Patient Days	Average Length of Stay (days)

Educational Programs

- ACGME fully accredited two-year residency in pediatric surgery
- ACGME fully accredited fellowship in pediatric surgical critical care
- Clinical fellowships in trauma and clinical research for senior level residents in general surgery
- Basic science research fellowships in Pediatric Surgical Research for residents in general surgery
- Pediatric surgical colorectal fellowship and pediatric surgical colorectal research fellowship
- Clinical research fellowships in clinical and outcomes research for general surgery residents in accredited programs
- Pediatric minimally invasive surgery fellowship for residents in accredited programs in general surgery
- Bariatric surgery fellowship for residents in accredited programs in general surgery.
- Comprehensive pediatric surgery rotations in the care of infants, children, and adolescents with surgical disease
- Clinical clerkship and subinternships in pediatric surgery







**The Division of Surgical Oncology**, led by Dr. Raphael Pollock, is devoted to clinical and basic research activities for the evaluation and management of cancer. Our goals are to provide excellence in clinical cancer care, to educate medical students, residents, and fellows, and to conduct clinical and basic research. Surgical Oncology is the recipient of the Patient Satisfaction Quarterly Achievement Award for the first three quarters of 2013-2014 and was awarded \$1500 for hitting and exceeding its internally set target of 96.1%. Our peloton, Team Buckeye-OSU Surgical Oncology and Friends rides annual in the Pelotonia fundraiser bicycle tour. The team raised over \$71,000 this year to support cancer research. Two new faculty members were recruited, Dr. Mary Dillhoff and Dr. Lawrence Shirley and a new hepato-pancreato-biliary service was initiated in Winter 2014, providing multi-specialty team care for our patients.

## Research

Most of the research performed in the division is translational, in which ideas and hypotheses from the laboratory are incorporated into clinical evaluation through the clinical trial mechanism.

- Dr. Raphael Pollock is principal investigator of an \$11.5 million National Cancer Institute Specialized Programs of Research Excellence (SPOR) grant, awarded to the Sarcoma Alliance for Research for Collaboration last fall.
- Dr. William Carson and Dr. Zhiwei Hu were awarded a Translational Therapeutics Seed Grant from the OSUCCC, titled: "Targeted Therapy of Melanoma with an Immunoconjugate Directed Against Aberrantly Expressed Tissue Factor". The investigation's goals are to evaluate the effects of intra-lesional ICON therapy delivered via an adenoviral vector on tumor growth in experimental models and to determine the role of the host immune system in mediating the effects of ICON therapy.
- Dr. Mark Bloomston is principal investigator on at least 5 clinical trials over the past year in the gastrointestinal surgical oncology program
- Dr. Lisa Yee was awarded an NIH R01 grant for her study "Omega-3fatty acids and ERPR(-) and HER-2/neu(+) breast cancer prevention", which researches novel dietary chemo-prevention approaches for breast cancer.

**The Surgical Oncology Peloton raised over \$71,000 during Pelotonia 2014.**







Our Mission

The mission of the Division of Surgical Oncology is reflected in the mission of The Arthur G. James Cancer Hospital and Richard J. Solove Research Institute. We are dedicated to the evaluation and management of cancer and to cancer research and education.

Educational Programs

- Two-year ACGME accredited surgical oncology fellowship program, which includes 21 months of clinical work and 3 months of basic research. There is an optional third year available for basic science research.
- Comprehensive rotation in surgical oncology for third- and fourth-year residents in general surgery
- Sub-internship in surgical oncology

Accomplishments in Education

- Dr. Abdel-Misih was awarded the Department of Surgery Michael J. Walker, M.D. Faculty Teaching Award for 2014.
- Dr. Carl Schmidt was awarded the Department of Surgery Resident Faculty Teaching Award for 2014.
- First-year fellow Dr. Jill Onesti was awarded Best Poster Presentation at the Ninth International Symposium on Regional Cancer Therapies held in Steamboat Springs, Colorado.

Clinical Programs

- The Hepato-Pancreato-Biliary Service, led by Dr. Mark Bloomston, was established, offering multimodality care – the model for the Wexner Medical Center
- High-risk breast cancer clinic directed by Dr. Lisa Yee
- Sarcoma program led by Dr. Raphael Pollock
- The thyroid cancer program led by Dr. John Phay is one of the top programs in the U.S.
- Dr. Harrison Howard, Dr. Stephen Povoski and Dr. Alicia Terando maintain very busy clinical practices.

5,499	22,342	681	3,985	6.04
OR Procedures	Outpatient Visits	Admissions	Patient Days	Average Length of Stay (days)





# Thoracic Surgery



**The Division of Thoracic Surgery**, led by Dr. Patrick Ross, Jr., continues to build our accomplishments within the medical center, nationally and internationally, focused on our clinical programs and promoting research and publications. We recruited Robert Merritt, MD as an Associate Professor. Dr. Merritt is an accomplished surgeon who will augment our minimally invasive programs with his experience in minimally invasive foregut surgery.

Our photodynamic therapy (PDT) program has grown considerably during the past year. The multicenter outcomes registry for lung and esophageal photodynamic therapy has expanded to 8 centers with the addition of the University of Chicago and Provident Health System. We have four additional centers who have expressed interest in joining us; we are exploring the possibility of adding them to this PDT network. The PDT for pleural disease trial is through the IRB process and should open this year. We have partnered with New England Medical Center to open a PDT for recurrent breast cancer trial which will also be multi-center. We will collaborate with radiation oncology and surgical oncology to enroll patients to this trial. Finally, we had been selected as a site for a randomized clinical trial on PDT for cholangiocarcinoma. We will collaborate with general surgery, gastroenterology, and medical oncology to conduct this trial.

The robotic thoracic surgery program has become more robust during the past year. Three of our faculty now perform robotic cases for pulmonary resection, esophagogastrectomy, and mediastinal resection. We have performed more than 450 thoracic robotic cases with outstanding results. As the teams' experience has grown, we have been able to perform increasingly complex types of procedures, including chest wall resections and sleeve resections. Our experience has been presented at the Society of Surgical Oncology and International Association for the Study of Lung Cancer.

The foundation of our clinical care is a multi-disciplinary approach to evaluation and management. The foundation for our research is collaboration with multiple specialties. We anticipate further progress this year as we expand the spectrum of basic and outcomes research projects in pulmonary and esophageal disease.







Our Mission

The Division of Thoracic Surgery is dedicated to developing and applying multidisciplinary care for malignant and benign diseases of the chest.

Research

- Photodynamic Therapy: Prospective outcomes registry, immunobiology, PDT for malignant pleural disease, management of photosensitivity
- Robotic-Assisted Surgery: Comparative effectiveness studies, multi-center outcomes registry
- Autofluorescence Bronchoscopy: Early detection of airway malignancies
- Transplant Immunology: Mechanisms of bronchiolitis obliterans, macrophages and T cells in cardiac transplant rejection
- Diaphragmatic Pacing: Applications in respiratory failure
- Effect of NOTCH signaling in human lung cancer
- Role of genetic markers in early lung cancer
- Quality and safety metrics for healthcare improvement

Clinical Care

- Adult thoracic surgery
- Foregut surgery
- Diaphragmatic pacing
- Electromagnetic bronchoscopy
- Navigational bronchoscopy
- Endobronchial ultrasound
- Lung volume reduction surgery
- Photodynamic therapy
- Robotic surgery epicenter for thoracic surgery
- Thoracic oncology multidisciplinary clinic
- Tracheal reconstruction

Education

- Two-year cardiothoracic surgery fellowship accredited by the Accreditation Council for Graduate Medical Education
- Comprehensive rotation in thoracic surgery for first- and third-year residents in general surgery
- Summer Scholars is an eight week program that gives first year medical students exposure to the field of Cardiothoracic Surgery.
- Training program in photodynamic therapy and robotic surgery

In May 2014 the Division of Thoracic Surgery celebrated performing 10,000 robotic cases, one of only three thoracic robotic surgery services in the world to reach this milestone.

2,923 OR Procedures	3,647 Outpatient Visits	902 Admissions	5,516 Patient Days	6.20 Average Length of Stay (days)
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Our surgeons are rated among the top ten percent nationally for patient satisfaction.



# Transplantation



**The Division of Transplantation** combines a busy clinical transplant program with a diverse and productive research effort. Within the Comprehensive Transplant Center (CTC), the division is active in a number of collaborative, interdisciplinary endeavors to enhance both the clinical activities and the basic research efforts in transplantation at Ohio State. The CTC's team of specialists pursue areas of common interest in transplantation, including immunopharmacology, immune assessment and monitoring, immune engineering, information systems, biostatistics, clinical trials, public policy and ethical considerations, and communications and public relations.

The division welcomes Dr. Ashraf El-Hinnawi, who joins our faculty as assistant professor of surgery following the completion of our transplant surgery fellowship. His interests include pancreas transplantation and clinical outcomes.

Dr. Sylvester M. Black continues his collaboration with Dr. Ahmet Kilic and Dr. Bryan A. Whitson, both with the Division of Cardiac Surgery, is conducting a novel investigation of ex-vivo organ perfusion and preservation in the Collaboration for Organ Perfusion, Protection, Engineering and Regeneration (COPPER) laboratory.

Dr. Ginny L. Bumgardner was awarded a NIH T32 research training grant entitled "Advanced Research Training in Immunology for Surgical Trainees" (ARTIST) which is funded by the National Institute of Allergy And Infectious Diseases of the National Institutes of Health for a five year period. This grant supports research training in Immunology for two competitively selected surgical trainees each year.

Dr. Elizabeth Davies chairs the executive committee of the Organ Donor research Consortium and Division chief Dr. Mitchell L. Henry is active in leadership roles in numerous professional societies and organizations.

Dr. Elmahdi A. Elkhmmas, professor of clinical surgery, is Chief-of Staff elect for the Wexner Medical Center. He also continues his activism in improving healthcare in his native country of Libya. Dr. Elkhmmas is the founder and editor-in-chief of the Ibnosina Journal of Medicine and Biomedical Sciences, a peer-reviewed journal with the mission to train the next generation in the peer review process, and to provide researchers from developing countries with a venue for mentorship.

The kidney transplant program is one of the busiest in the nation and includes the living-donor program and paired-donor exchange program. The Wexner Medical Center is recognized by U.S. News & World Report as a top hospital for kidney disease care. Hand-assisted laparoscopic donor nephrectomy (HALD) has replaced the open technique and is employed by most transplant centers. Drs. Amer Rajab and Ron Pelletier performed the first HALD at Ohio State in December of 1999; since then, a minimally invasive approach has been used exclusively by these two kidney transplant surgeons. In June 2014, the 1500th procedure was performed, establishing a series of successes unparalleled in the transplant surgery community.

Under the guidance of Dr. Ronald P. Pelletier, Ohio State has joined the ranks of transplant centers that help incompatible pairs of recipient/donors through a process called paired exchange, which involves two or more living donor and recipient pairs. During FY 2013-2014, 22 kidney transplants were completed via the exchange program.

Dr. Amer Rajab directs the islet cell transplantation program providing "cutting-edge" treatment for insulin-dependent diabetics. Dr. Rajab also directs the pediatric transplant program at Nationwide Children's Hospital.





Our Mission

The Division of Transplantation is dedicated to building upon a solid foundation of basic, translational, and clinical research in order to define and develop the next generation of high-quality, comprehensive, cost-effective transplant programs.

Kidney Transplant Programming at COSI (Center of Science & Industry)

A unique partnership between COSI and the Comprehensive Transplant Center (CTC) allows the viewing of a kidney transplant, with taped footage from both the donor and recipient surgeries. Live narration is provided by a member of the CTC. Non-school audiences, including teens, adults, and community groups are welcome, but the focus has been on education for students. The program, “In Depth: Kidney Transplant”, is a multi-point program that connects up to five high schools at one time, via video-conferencing or an actual trip to COSI’s theatre. Prior to the program, teachers are sent a kit of materials, containing materials to conduct both pre- and post-visit activities, along with booklets for students to use during the program. Kit activities include: dialysis, blood typing, suturing, transplant coordinator challenge and ethical discussion prompts.

Clinical Statistics



Clinical

- Pre-transplant
- Post-transplant and transplant wellness program currently sees more than 2,000 patients
- Living donor kidney transplantation
- Kidney transplantation
- Islet transplantation
- Liver transplantation
- Pancreas transplantation
- Vascular access
- Recovery of the deceased donor

Research

- Transplant rejection
- Allograft acceptance and transplant tolerance
- Novel immunologic strategies for islet cells transplantation
- Cellular transplantation
- New immunosuppressive compounds

Educational Programs

- Two-year fellowship in solid organ transplantation, accredited by the American Society of Transplant Surgeons
- Rotations for general surgery residents during their intern and PGY-3 year
- Rotation for surgery residents from the Mount Carmel Health System, Riverside Methodist Hospital, and Doctors Hospital provides the clinical transplant experience required by the American Board of Surgery.
- Biopsy Conference. The weekly conference reviews renal transplant biopsies and liver transplant biopsies, in conjunction with the pathologists and nephrology physicians.
- The transplant surgeons continue to be involved with mock oral boards conducted for the residents. Dr. Rajab serves as the Faculty Director for the department, and Dr. Black and Dr. Pelletier served as examiners.
- A one month Observership Program during which an international visitor comes to The Ohio State University Medical Center to observe in transplant surgery



# Trauma, Critical Care and Burn



**The Division of Trauma, Critical Care and Burn** was formed in March, 2006 with the charge of enhancing the Department of Surgery's programs in surgical critical care, trauma, burn and emergency general surgery and developing an acute care surgery program. This year we have seen continued growth in number of faculty and also in clinical volume and scholarly activity.

Steven M. Steinberg, MD, professor of surgery, is the director of the Division of Trauma, Critical Care, and Burn and is a member of the board of the clinical trauma committee of Central Ohio Trauma Systems. Dr. Steinberg is listed as one of the Best Doctors in America by the *U.S. News and World Report*.

The division recruited new faculty member J. Kevin Bailey, MD, associate professor of clinical surgery, who joined the faculty in September 2013. He specializes in acute burn care, reconstruction of burn injuries, and surgery of the hand. His research interests include the efficacy of laser use for burn scar management.

Dr. Daniel S. Eiferman, assistant professor of surgery, is the assistant program director of the surgical critical care fellowship. He served as a Howard Hughes Medical Institute Clinical Mentor, developing an ultrasound curriculum for both the surgical residents and critical care fellows and co-developing MDT3 (Multidisciplinary Team Training for Trauma) to help improve communication and performance during Level I traumas. He is also the Co-Chair of the Clinical Quality and Safety Committee for the Wexner Medical Center.

Under Dr. David Evans' leadership the Trauma Program posted a 15 percent increase for the year and a 3.88 percent annual increase in the growth of the program over the past five years. Of the patients admitted 23 percent had a moderate to severe Injury Severity Score and 39 percent of the patients required at least 1 operative procedure. His research interests focus on outcomes in geriatric trauma patients, EMS and trauma systems, and clinical nutrition support

Christian Jones, MD, assistant professor of surgery, is Associate Medical Director of Trauma Services and Medical Director of Process Improvement in the Department of Surgery. In his first year on faculty, he received the Outstanding Contributions award from the Department of Emergency Medicine, and continues to use his non-clinical time to advance medical student and resident education as an Expert Educator for the College of Medicine.

Larry M. Jones, MD, associate professor of clinical surgery, is the Director of OSU Medical Center's Burn Center. He is an Advanced Burn Life Support (ABLS) national faculty member and serves on the ABLS Advisory Committee of the American Burn Association. He also serves as state faculty for Advanced Trauma Life Support of the American College of Surgeons Committee on Trauma.

The addition of Daniel Benson, MD and Lauren Licata, MD (Transition to Practice Fellows, or TTP) for six month appointments provides additional surgical coverage.

Finally, Dr. Sidney Miller retired after many years as the director of the Burn Center. Dr. Miller lead the growth of the center from a service with 50 patients per year to an integral part of the Division with more than 300 patients per year. The Department has established the annual Sidney F. Miller Lectureship in his honor.





## Our Mission

To improve people's lives through innovation in research, education and patient care in the areas of surgical critical care, trauma, burn and emergency surgery.

### Research Highlights

- Faculty members in the division published 49 scholarly articles, abstracts and book chapters.
- Division members had 20 podium presentations at national meetings and numerous other presentations at international and national meetings by our faculty and staff.
- The division broadened the scope of its research activities to include representatives from Anesthesiology, Dietary, Pain and Palliative Medicine, Nursing, and Pharmacy. A number of collaborative initiatives were initiated during the year, including the initiation of a dedicated research curriculum titled "How to Do Research" and joint clinical studies with the Department of Anesthesia.

### Clinical Care

- We have increased trauma volume 15% over the prior year.
- We have implemented a multi-disciplinary abdominal wall reconstruction service/clinic with plastic surgery that is attracting new patients into the OSUMC system.
- Dr. David Evans has developed one of the first protocols for prehospital administration of tranexamic acid (TXA) in hemorrhagic shock, which resulted in the first known TXA administration to a trauma patient in the field in the United States.

**5,026**  
OR Procedures

**3,837**  
Outpatient  
Visits

**2,167**  
Admissions

**14,606**  
Patient Days

**7.01**  
Average Length of  
Stay (days)

### Education Highlights

- Completion of the surgical critical care fellowships by Dr. Daniel Benson, Dr. Cyrus Chan, Dr. Ramy Fouad, and Dr. Daniel Vazquez.
- Dr. Christian Jones has become a LeadServeInspire (LSI) Longitudinal Group Facilitator. Dr. Jones also received the Outstanding Contributor Award from the Department of Emergency Medicine
- Dr. David Lindsey has been named an associate academic program director for the LSI curriculum as well as leading their new TWUFFER (a Twitter app to organize and schedule tweets) course.
- Dr. David Evans is a member of ASPEN's Clinical Practice Committee and Research Section Leadership Council and the Association for Academic Surgery Global Affairs Committee.

### Community Outreach Highlights

- The 7th Annual OSU Burn Center Family Burn Camp was held on August 16-18, 2013 at Camp Joy in Clarksville, Ohio. This camp brings together former burn patients and their families for a weekend of camping, connecting with fellow burn survivors, and family team building activities.
- The Axemen Motorcycle Club, a nonprofit organization comprised of firefighters from Central Ohio, hosted an annual charity golf scramble to benefit the OSU Burn Center's development fund.
- The OSU Burn Team provided 17 community education events and 54 educational events to medical personnel including EMS over the past year.



# Vascular Diseases and Surgery



**The Division of Vascular Diseases and Surgery** provides exemplary care to the citizens of Ohio and the surrounding area. Our primary mission is excellence in patient care. Our vascular clinics consistently achieve exceptional patient satisfaction ratings. Knightsbridge Vascular Surgery clinic achieved Quarterly Patient Satisfaction Awards for the second and fourth quarters of FY 2013-2014. Our interdisciplinary team of vascular surgeons, cardiac surgeons, anesthesiologist and cardiologist are nationally recognized for providing quality care.

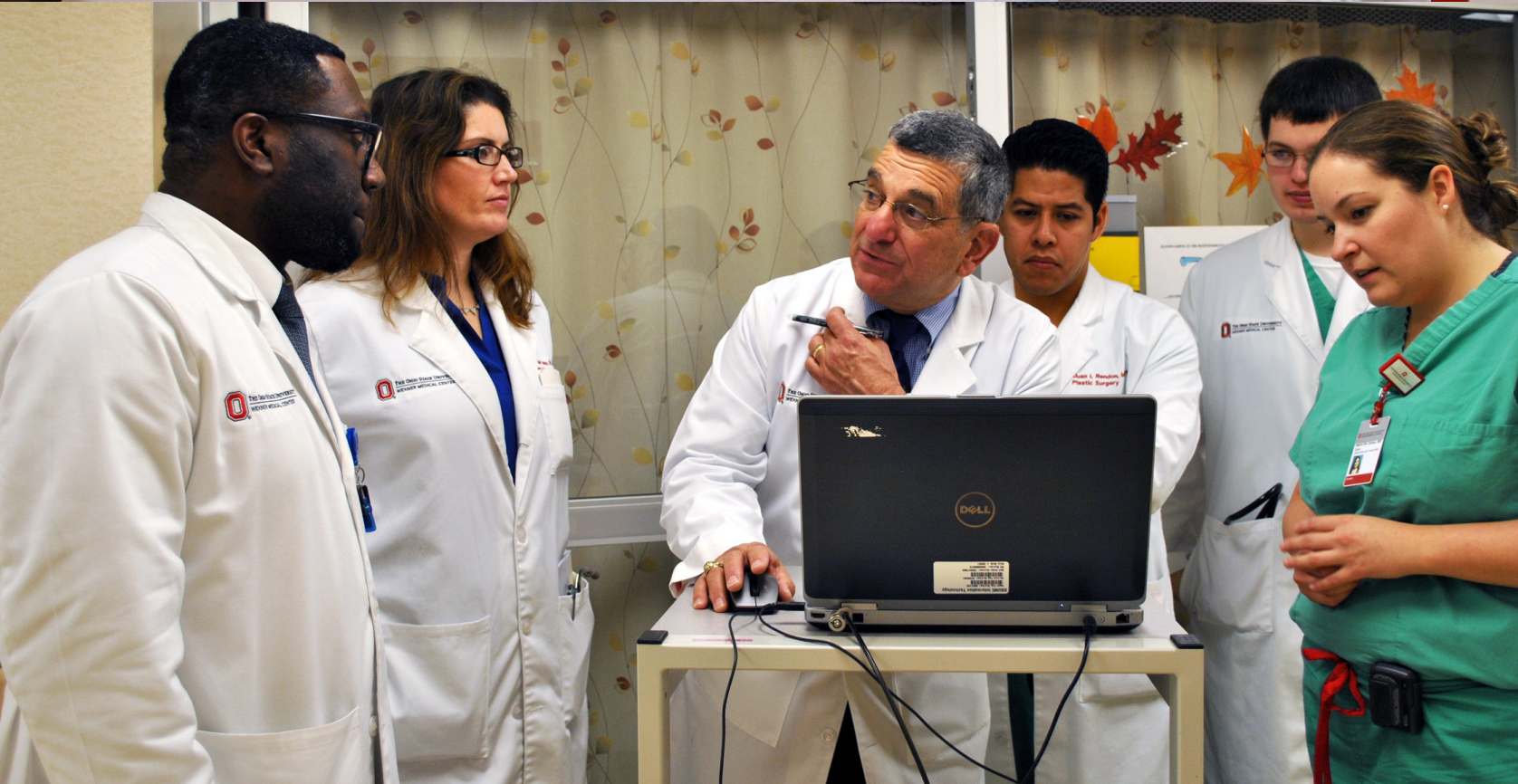
Division chief Dr. Patrick Vaccaro completed his MBA through the Fisher College of Business December, 2013, and was one of three students to receive an award for academic excellence from the faculty. He also became a member of the Ambulatory Services Executive Committee at the Wexner Medical center. Dr. Michael Go was appointed to the position of Medical Director of Vascular Diseases & Surgery Services at OSUE. In assuming this role, Dr. Go will be leading the expansion of vascular services at OSU Hospital East. Dr. Joseph Haurani became a member of the American College of Surgeons and passed his RPVI examination. He has received advanced training in the performance of fenestrated aortic endografts, allowing us to treat patients with more complex aortic disease through less invasive techniques rather than open repair.

We are committed to training the next generation of vascular surgeons. Through our Vascular Surgery Fellowship Program our faculty have trained 27 vascular surgeons who are currently practicing in the United States and international communities. Dr. Nicolas Mouawad completed his fellowship on June 30, 2014 and will be going into practice with Axel Thors, DO one of our previous graduates. Dr. Loren Masterson is our second year fellow and Dr. Babatunde Oriowo is our new first year fellow. Dr. Satiani was reappointed to the Ohio Commission on Minority Health by Governor Kasich. He also continues to share a leadership role in the faculty development and mentoring program which he helped establish, and also is the director of the Vascular Labs at the Ross and OSU East with both labs obtaining recertification. Dr. Jean Starr was awarded the SVS Women Leadership Award by Society for Vascular Surgery and attended the Faculty Leadership Training program. She was co-director of the Medtronic Fellows Technology Exchange Conference held in Minneapolis, where she helped to train fellows in advanced endovascular skills from programs around the country.

In research, Dr. Cameron Rink directs a robust lab where he continues his research on cerebrovascular collaterals and acute ischemic stroke. Dr. Rink is co-investigator of a basic science study that receives RO1 funding totaling \$1.3 million. Dr. Rink was awarded the Young Investigator Award by The Ohio State University Translational to Clinical (T2C) Regenerative Medicine Care Conference as well as the 2013 Entrepreneurial Scholar at the OSU Technology Commercialization and Knowledge Transfer Office. During this academic year division faculty members published 149 scholarly articles, books, chapter's abstracts, and posters. The Division was also granted IRB approval for a human trial investigating the use of autologous bone marrow derived hematopoietic stem cells with platelet rich plasma to stimulate angiogenesis for the treatment of critical limb ischemia.

Blair Vermilion, MD, associate professor, has retired after more than 25 years of service to The Ohio State University Department of Surgery. A graduate of the OSU College of Medicine, Dr. Vermilion specialized in vascular surgery. In addition to his clinical practice with the Division of Vascular Diseases and Surgery, he also served as medical director of utilization management for the Wexner Medical Center.





# Our Mission

Our mission is to deliver the highest quality of care to patients throughout Central Ohio suffering with peripheral vascular disease, contribute to innovations in medicine through translational research and clinical outcomes studies, and educate medical students and postgraduate trainees. We are focused on how to best fulfill our mission and truly create the future of medicine to improve people's lives. A key element of that focus is our commitment to leadership in personalized health care as well as to be a high-performance organization and workplace of choice.

## Clinical Care

- Comprehensive general vascular diseases and surgery service
- Endovascular surgery
- Laser surgery for varicose veins
- Arterial surgery clinic
- Venous surgery clinic
- Varicose vein clinic
- Dialysis clinic
- Wound care clinic
- Outreach vascular clinics in Ashland, Bellefontaine, Fayette, Marysville and Upper Sandusky

2,582	6,818	606	2,875	4.67
OR Procedures	Outpatient Visits	Admissions	Patient Days	Average Length of Stay (days)

## Education

- Two-year ACGME accredited fellowship in vascular diseases and surgery
- Comprehensive rotation in vascular diseases and surgery for junior and senior general surgery residents
- Sub-internship in vascular diseases and surgery
- Vascular Grand Rounds approved for Category 1 CME clinical and basic science topics discussed (bi-weekly)
- Divisional Morbidity and Mortality Conference, Pre-Operative Case Conference, Journal Club, Endovascular M&M and Angiogram Conference, Interesting Case Conference, Research Update Conference, Vascular Lab Lecture and outside speaker conference (quarterly)
- Dr. Bhagwan Satiani, MD presents monthly business classes to the students and residents in the Department of Surgery.





## Department of **SURGERY**

Administration 614.293.8631

Division of **Cardiac Surgery** 614.293.7727

Division of **Colon and Rectal Surgery** 614.293.8229

Division of **General and Gastrointestinal** 614.293.8229

**Surgery** Division of **Pediatric Surgery** 614.722.3911

Division of **Surgical Oncology** 614.293.0968

Division of **Thoracic Surgery** 614.366.7431

Division of **Transplantation** 614.293.4380

Division of **Trauma, Critical Care and Burn** 614.293.9488

Division of **Vascular Diseases and Surgery** 614.293.8536

